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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,476	10/17/2001	Timothy James Collins	IND10254	6045
22917	7590	03/17/2009		
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			EXAMINER PENDLETON, DIONNE	
			ART UNIT 2627	PAPER NUMBER
			NOTIFICATION DATE 03/17/2009	DELIVERY MODE ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TIMOTHY JAMES COLLINS, RICHARD STANLEY
RACHWALSKI, PATRICK L. RAKERS, DAVID P. GURNEY, and
STEPHEN L. KUFFNER

Appeal 2009-0505
Application 09/981,476
Technology Center 2600

Decided:¹ March 13, 2009

Before JOHN A. JEFFERY, MARC S. HOFF and CARLA M. KRIVAK,
Administrative Patent Judges.

JEFFERY, *Administrative Patent Judge.*

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 1 and 3-14. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

STATEMENT OF THE CASE

Appellants invented a method and device for transmitting data on a channel within a given power range. The method and device begin transmitting data when a first condition has been met, such as a power level, a synchronization pulse, or a pseudo-random pause. The transmission stops when the power falls below the first power threshold or exceeds a second power threshold level. This arrangement reduces the near-far problem.²

Independent claim 1 is reproduced below:

1. A method comprising the steps of:

receiving a carrier signal;

continuously monitoring the carrier signal for a first predetermined condition;

selecting a channel and continuously transmitting data on the selected channel if the first predetermined condition is satisfied and while transmitting the data continuously monitoring the carrier signal for a second predetermined condition; and

ceasing the transmitting of the data on the selected channel if the second predetermined condition is satisfied during the transmitting of the data on the selected channel, wherein the first predetermined condition is satisfied based on

² See generally Spec. 13:5-15:15.

one of, when a received power level exceeds a first threshold and a synchronization signal, and the second predetermined condition is satisfied based on the received power level.

The Examiner relies upon the following as evidence in support of the rejection:

Meier	US 5,294,931	Mar. 15, 1994
Carrender	US 5,850,187	Dec. 15, 1998
Turner	US 6,549,119 B1	Apr. 15, 2003 (filed Jan. 4, 1996)
Steeves	US 6,570,487 B1	May 27, 2003 (filed Apr. 22, 1999)

(1) Claims 1, 3, and 5-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Steeves, Turner, and Meier (Ans. 3-9).

(2) Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Steeves, Turner, Meier, and Carrender (Ans. 9-10).

Rather than repeat the arguments of Appellants or the Examiner, we refer to the Brief and the Answer³ for their respective details. In this decision, we have considered only those arguments actually made by Appellants. Arguments which Appellants could have made but did not make in the Brief have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

³ Throughout this opinion, we refer to (1) the Appeal Brief filed October 30, 2006, and (2) the Examiner's Answer mailed February 27, 2007.

REJECTION OVER STEEVES, TURNER, AND MEIER

Claims 1, 3, 5, and 14

The Examiner finds that the combination of Steeves, Turner, and Meier teaches all the recited elements in independent claim 1 (Ans. 3-9). Appellants argue that: (1) the combination does not teach a tag device that continuously monitors a carrier signal while continuously transmitting data; and (2) the combination does not teach or disclose a tag device that ceases transmitting data if it detects a second condition based on the received power level (Br. 6-14).

ISSUE

The following issue has been raised in the present appeal:

Have the Appellants shown the Examiner erred in finding that Steeves, Turner, and Meier collectively teach continuously transmitting data on a channel if the first predetermined condition is met while also continuously monitoring the carrier signal for a second predetermined condition in rejecting claim 1 under § 103?

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

Specification

1. The Specification states “the tag 110 continuously monitors the received signal strength” and “[t]he fully activated tags in a group will continue to transmit their information in multiple passes.” (Spec. 14:8, 9, 13, and 14).

Steeves

2. Steeves discloses a technique of processing a tag 151. Tag 151 is normally in a stand-by state and monitors the RF environment for an activation signal from a reader 101 at step 301. When the activation signal is received by the tag at step 302, the tag changes into an active state. (Steeves, col. 7, ll. 38-52; Figs. 1 and 3).
3. Once activated, Steeves discloses the tag's receiver 203 monitors at 307 the traffic on a transmission channel and determines a time slot at 308 and 309 for transmitting the data. (Steeves, col. 8, ll. 5-10 and col. 9, ll. 23-26; Figs. 2-3).
4. The tag synchronizes with other tags and decides when to transmit data based on the RF detected activity or some threshold value. (Steeves, col. 8, ll. 10-16 and col. 8, l. 44 – col. 9, l. 13).
5. Steeves describes a preferred embodiment that transmits the same data in two active cycles followed by passive cycles where the data is not transmitted. (Steeves, col. 8, ll. 22-34 and 38-43 and col. 9, ll. 26-28; Fig. 3)
6. Steeves then checks for an acknowledgement signal at step 312 from the reader. If all packets have been transmitted, the tag returns to a stand-by state at step 306. (Steeves, col. 9, ll. 26-37; Fig. 3).

Turner

7. Turner teaches a transponder that powers up when an interrogation signal is received at step 50. (Turner, col. 3, ll. 47-50; Fig. 5).

8. Once receiving the interrogation signal at step 50, Turner discloses that the transponder transmits or modulates the data at step 53 using a stored code sequence. (Turner, col. 3, ll. 55-58; Fig. 5).
9. After a predetermined number of clock periods, Turner checks or monitors whether an acknowledgement or ACK has been detected at step 54. (Turner, col. 3, ll. 59-61 and col. 4, ll. 3-4; Fig. 5).
10. If an ACK is received, the process ceases transmitting data at 55. If no ACK is detected, the process loops back, restarts the delay period at step 51, and retransmits the data at step 53 after the expiration of the delay period at step 52. (Turner, col. 3, ll. 50-58 and col. 3, l. 61-col. 4, l. 2; Fig. 5).

Meier

11. Meier does not disclose or teach continuously transmitting data while continuously monitoring for a predetermined condition. (*See generally* Meier).

Carrender

12. Carrender does not disclose or teach continuously transmitting data while continuously monitoring for a predetermined condition. (Carrender; col. 10, l. 53 – col. 12, l. 35; Figs. 9 and 11-14).

PRINCIPLES OF LAW

During examination of a patent application, a claim is given its broadest reasonable construction “in light of the specification as it would be interpreted by one of ordinary skill in the art.” *In re Am. Acad. of Sci. Tech.*

Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004). “[T]he words of a claim ‘are generally given their ordinary and customary meaning.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal citations omitted).

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). If the Examiner’s burden is met, the burden then shifts to the Appellants to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

ANALYSIS

We begin by construing the term, “continuously,” recited in claim 1. As instructed by *Am. Acad. of Sci. Tech.*, 367 F.3d at 1364, we must interpret this term in light of the Specification. Since the Specification has no special definition of the term (FF 1), we therefore interpret the term in light of its ordinary and customary meaning. *Phillips*, 415 F.3d at 1312. Merriam-Webster’s Online Dictionary⁴ defines “continuous” as “marked by uninterrupted extension in space, time, or sequence.” Therefore, we find the phrase, “continuously transmitting data on the selected channel . . . and

⁴ Merriam-Webster’s Online Dictionary, 11th ed., *available at* <http://www.merriam-webster.com/dictionary/continuous> (last visited February 20, 2009)

while transmitting the data continuously monitoring the carrier signal for a second predetermined condition,” to mean to transmit data and to monitor the carrier signal for a second predetermined condition in an uninterrupted manner relative to time.

Steeves discloses a method that includes receiving an activation or carrier signal at 302 (FF 2 and 4) and continuously monitoring the carrier signal at 307 to determine when to transmit the data on a selected channel (FF 3). Specifically, during monitoring, Steeves’ tag (e.g., 151) synchronizes with other tags and decides when to transmit data based on the RF detected activity or some threshold value (FF 4). Thus, Steeves discloses continuously monitoring the carrier signal for a first predetermined condition that is based on a synchronization signal with other tags as recited in claim 1. Steeves further explains a preferred embodiment where the same data is transmitted in two active cycles, each followed by a passive cycle where the data is not transmitted (FF 5). However, Steeves is not limited to the preferred embodiment and, during an active cycle (*id.*), data is continuously transmitted on the selected channel as required by claim 1.

Steeves further discloses that the process transmits in active cycles followed by non-transmitting passive cycles (FF 5). The method then checks for an acknowledgement signal or a second predetermined condition at 312 after the last passive cycle (*id.*) and goes into a stand-by state if all packets have been transmitted (FF 6). Thus, as the Examiner admits (Ans. 4), Steeves does not disclose continuously transmitting while continuously monitoring the carrier signal for a second predetermined condition and relies on Turner to overcome Steeves’ deficiencies. Turner discloses transmitting the data at step 53 over a selected channel using a stored code sequence (FF

7-8). After a number of clock periods, Turner monitors whether a second predetermined condition or ACK has been detected at step 54 (FF 9). If an acknowledgement is received, the process ceases transmitting data at 55 (FF 10). If no acknowledgement is detected, the process loops back, restarts the delay period at step 51, and then retransmits the data at step 52 after the expiration of the delay period. (*Id.*)

The Examiner takes the position that Appellants have narrowly construed the term, “continuously” (Ans. 12). The Examiner finds that Turner’s repeated loop pattern from step 54 to step 51, when no acknowledgement is received, reads on continuously transmitting data at step 53, while continuously monitoring for a second predetermined condition as recited in claim 1 (Ans. 4, 5, 11, and 12). We disagree. Turner discloses a deliberate delay period between steps 51 and 52 within each loop where no data is transmitted. By including a delay period when no data is being transmitting within each loop, there are gaps of time or interruptions in the data transmission such that Turner’s method does not continuously transmit data while continuously monitoring for a second predetermined condition, as claim 1 requires.

Additionally and in the alternative, if receipt of the transmitted data is acknowledged and detected during the first loop (FF 10), Turner still teaches the occurrence of a clock delay or an interruption prior to monitoring for a second or ACK condition (FF 9-10). Thus, even if in the scenario where there is no loop, Turner does not teach continuously monitoring the carrier signal for a second predetermined condition while continuously transmitting the data as required by claim 1. Additionally, Meier does not cure the deficiencies of Steeves and Turner (FF 11). Therefore, the combination of

Steeves, Turner, and Meier fails to teach the steps of “continuously transmitting data on the selected channel . . . and while transmitting the data continuously monitoring the carrier signal for a second predetermined condition” as recited in claim 1.

For the above reasons, we will not sustain the Examiner’s rejection of independent claim 1 nor dependent claims 3, 5 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Steeves, Turner, and Meier.

Claims 6-13

Independent claim 6 recites a device comprising “a transmitter . . . that . . . is further configured to cease the transmitting of the data on the selected channel when the second condition is satisfied during the transmitting of the data on the selected channel.” As these limitations are commensurate in scope with claim 1, we refer to our previous discussion relating to how the combination of Steeves, Turner, and Meier does not meet the above-quoted claim limitations and hereby incorporate that discussion by reference.

For the foregoing reasons, Appellants have shown error in the Examiner’s obviousness rejection of independent claim 6 based on the collective teachings of Steeves, Turner, and Meier. Accordingly, we will not sustain the rejection of claim 6 and dependent claims 7-13 for similar reasons.

REJECTION OVER STEEVES, TURNER, MEIER, AND CARRENDER

Claim 4 depends from claim 1. We refer to our previous discussion relating to how the combination of Steeves, Turner, and Meier does not meet

the limitations of claim 1 and hereby incorporate those discussions by reference. Moreover, Carrender does not cure the deficiencies of Steeves, Turner, and Meier (FF 12). As such, Appellants have shown the Examiner erred in rejecting claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Steeves, Turner, Meier, and Carrender.

CONCLUSIONS

For the foregoing reasons,

(1) In rejecting claims 1, 3-5, and 14 under § 103, Appellants have shown the Examiner erred in finding the combination of Steeves, Turner, and Meier or Steeves, Turner, Meier, and Carrender teaches the limitation of continuously transmitting data on a channel if the first predetermined condition is met while also continuously monitoring the carrier signal for a second predetermined condition.

(2) In rejecting claims 6-13 under § 103, Appellants have shown the Examiner erred in finding the combination of Steeves, Turner, and Meier teaches the limitation of a device comprising “a transmitter . . . that . . . is further configured to cease the transmitting of the data on the selected channel when the second condition is satisfied during the transmitting of the data on the selected channel.”

DECISION

The Examiner’s decision to reject claims 1 and 3-14 is reversed.

Appeal 2009-0505
Application 09/981,476

REVERSED

ELD

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